

IN THE CLAIMS:

1. (Previously Presented) An apparatus comprising:
  - a first queue to track a current rate of task completion;
  - a second queue to track an average rate of task completion over time;
  - a comparator to compare an average of values stored in the first queue and an average of values stored in the second queue; and
  - a throttle to reduce a number of connections available on the apparatus if the comparator indicates that the average of the first queue is larger than the average of the second queue, wherein the comparator triggers comparisons more often as the number of connections is decreased.
2. (Original) The apparatus of claim 1, wherein the first queue and the second queue are circular queues.
3. (Previously Presented) The apparatus of claim 1, further comprising:
  - a timer to compute a length of time a connection is used and insert the time into the first queue.
4. (Previously Presented) The apparatus of claim 1, wherein the average of values stored in the first queue is inserted into the second queue.
5. (Previously Presented) The apparatus of claim 1, further comprising:
  - a trigger mechanism to trigger a comparison, the trigger mechanism triggering comparisons more often as the number of connections is increased.

6. (Original) The apparatus of claim 5, further comprising:  
a powers array to indicate when to trigger a comparison to the trigger mechanism, the powers array being an exponentially increasing/decreasing function.
7. (Original) The apparatus of claim 1, further comprising:  
a sensitivity multiplier applied to the average of the second queue to affect reaction speed.
8. (Original) The apparatus of claim 1, wherein the connections comprise network connections for sending messages, and wherein the apparatus comprises a multimedia messaging service center.
9. (Previously Presented) The apparatus of claim 1, wherein the rate of task completion comprises timing one subtask of a complex task, the subtask reflecting a load on the apparatus.
- 10-18. (Cancelled)
19. (Previously Presented) The apparatus of claim 1, wherein the throttle further increases the number of connections available if the average rate of task completion is lower than the average of the average rates of task completion.
20. (Previously Presented) A method of resource allocation comprising:  
comparing a current average rate of task completion of a system to an average of averages, wherein the average of averages is the average of a plurality of the results of each of the current average rate of task completion over time;

reducing a number of tasks executed by the system if the current average rate of task completion is larger than the average of averages, wherein the comparison is triggered more frequently as the number of tasks executed is reduced.

21. (Previously Presented) The method of claim 20, further comprising:  
triggering the comparison based on a number of measurements of the current rate of task completion reaching a predetermined threshold.
22. (Previously Presented) The method of claim 21, further comprising:  
adjusting the predetermined threshold based on results of a last comparison.
23. (Previously Presented) The method of claim 22, wherein the predetermined threshold is increased and the comparison is triggered less frequently if the system is speeding up.
24. (Previously Presented) The method of claim 23, wherein the predetermined threshold is set by a powers array, the powers array being a powers-of-two array; and  
the predetermined threshold is adjusted by shifting along the powers-of-two array to speed up or slow down the rate of triggering the comparison.
25. (Previously Presented) The method of claim 20, further comprising:  
timing a period of time that a connection is used; and  
inserting the period of time into a first queue, the average of the first queue being the current average rate of task completion.

26. (Previously Presented) The method of claim 25, further comprising:  
inserting the average of the first queue into a second queue, the  
average of the second queue being the average of averages.
27. (Original) The method of claim 26, wherein the first queue and the  
second queue are circular queues.
28. (Original) The method 26, wherein the average of the first queue  
and the average of the second queue are calculated when a  
comparison is triggered.
29. (Previously Presented) The method of claim 28, wherein a current  
average of the first queue is inserted into the second queue after the  
average of the second queue is calculated.
30. (Previously Presented) The method of claim 20, wherein the rate of  
task completion is determined by measuring a length of time required to  
complete one subtask of a complex task, the subtask reflecting an overall  
load on the system.
31. (Canceled)